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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/690,010	10/17/2000	Hideaki Yamanaka	198435US2	1829

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EXAMINER	
PHAN, TAM T	

ART UNIT	PAPER NUMBER
2144	

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/690,010	YAMANAKA ET AL.	
	Examiner	Art Unit	
	Tam (Jenny) Phan	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 October 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/05/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This application has been examined. Amendment A received on 06/07/2004 has been entered. Claims 1, 4-9, and 12-16 are amended. Claims 2-3 and 10-11 are original. Claims 17-18 are new.

2. Claims 1-18 are presented for examination.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

4. The effective filing date for the subject matter defined in the pending claims in this application is 01/31/2000.

Information Disclosure Statement

5. An initialed and dated copy of Applicant's IDS form 1449, Received on 01/05/2004, is attached to the instant Office action.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-5, 8, 9-13, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Touma et al. (U.S. Patent Number 6,288,809), hereinafter referred to as Touma, in view of Matsunaga et al. (U.S. Patent Number 6,434,164), hereinafter referred to as Touma.

8. Regarding claim 1, Touma disclosed a digital content downloading system using a network in which digital content possessed by a digital content retailer is downloaded to one of a plurality of consumers through a network, comprising: a plurality of subscriber lines each formed of an optical fiber and arranged between the consumers and the network, the network being managed by a network operator; an optical line terminator, arranged on one side of the network, for terminating a subscriber line on the network side; an optical network unit, arranged on a side of each consumer, for terminating a subscriber line on the consumer side; a star coupler configured to connect the subscriber lines terminated by the optical network units to the subscriber line terminated by the optical line terminator (Abstract, Figures 1, 5, 8,10, 12-13,16, column 1 lines 11-29, column 4 lines 60-67, column 5 lines 28-44).

9. Touma taught the invention substantially as claimed. However, Touma did not expressly teach a resource reservation server configured to reserve a particular bandwidth for the digital content in the subscriber lines in response to a request by a particular consumer; and downward bandwidth managing means for controlling downloading of the digital content from the digital content retailer to the optical network unit of the particular consumer so that the digital content is transmitted through the subscriber lines and the star coupler at the particular bandwidth reserved by the resource reservation server.

10. In an analogous art, Matsunaga disclosed digital content downloading system such as passive optical star network comprising a resource reservation server for reserving a particular bandwidth for the digital content in the subscriber lines in

response to a request by a particular consumer; and downward bandwidth managing means for controlling the downloading of the digital content from the digital content retailer to the optical network unit of the particular consumer to transmit the digital content through the subscriber lines and the star coupler at the particular bandwidth reserved by the resource reservation server (Figures 2, 4, 7, 11, and 13, column 10 lines 26-34).

11. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the system of Touma with the teaching of Matsunaga to include the bandwidth reservation feature in order to guarantee quality of service in the downstream and upstream channel (Figure 1, column 1 lines 52-57) since services such as audio and video transmission must be guaranteed (column 1 lines 52-57).

12. Regarding claim 2, Matsunaga disclosed a digital content downloading system using a network, wherein the particular bandwidth for the digital content reserved in response to the request by the particular consumer by the resource reservation server is guaranteed in a shared bandwidth of the subscriber lines (Figure 3 sign 410, Figure 13, column 1 lines 52-57).

13. Regarding claim 3, Touma and Matsunaga combined disclosed a digital content downloading system using a network, wherein the particular bandwidth for the digital content reserved by the resource reservation server in response to the request by the particular consumer is guaranteed in a first signal having a wavelength differing from that of a second signal corresponding to a shared bandwidth of the subscriber lines

(Touma, column 6 lines 28-44, column 5 lines 51-64, column 6 lines 1-8; Matsunaga, column 8 lines 18-32).

14. Regarding claim 4, Touma disclosed a digital content downloading system using a network wherein the optical network unit arranged on the side of the particular consumer comprises: an optical wavelength demultiplexing unit configured to demultiplex a multiplexed optical signal of a first wavelength transmitting through the subscriber line; a first optical receiving unit configured to receive a plurality of optical signals of the first wavelength demultiplexed by the optical wavelength demultiplexing unit and to convert the optical signals into a plurality of digital signals; a passive optical network processing unit configured to extract data of the digital content from the digital signals obtained by the first optical receiving unit; a plurality of interfaces, connected to a plurality of terminals in one-to-one correspondence, configured to respectively transmit data matching the corresponding terminal to the corresponding terminal; and a destination judging and header processing unit configured to judge the destination of the data of the digital content extracted by the passive optical network processing unit to determine a particular terminal to which the data of the digital content is downloaded, to perform header processing for the data of the digital content to identify the content retailer, and to transmit the data of the digital content to the particular terminal through one interface corresponding to the particular terminal (Abstract, Figures 1, 4A-4B, 8, 10, column 4 lines 60-67, column 5 lines 1-27, lines 51-64, column 7 lines 15-29).

15. Regarding claim 5, Touma disclosed a digital content downloading system using a network according to claim 1, wherein the optical network unit arranged on the side of

the particular consumer comprises an optical wavelength demultiplexing unit for configure to demultiplex a first multiplexed optical signal of a first wavelength transmitting through the subscriber line to a plurality of first optical signals of the first wavelength and to demultiplex a second multiplexed optical signal of a second wavelength transmitting through the subscriber line to a plurality of second optical signals of the second wavelength, the second multiplexed optical signal including data of the digital content of which the particular bandwidth is reserved by the resource reservation server; a first optical receiving unit configure to receive the first optical signals of the first wavelength from the optical wavelength demultiplexing unit and to convert the first optical signals into a plurality of first digital signals; a second optical receiving unit configure to receive the second optical signals of the second wavelength from the optical wavelength demultiplexing unit and to convert the second optical signals into a plurality of second digital signals; a passive optical network processing unit configure to extract the data of the digital content from the second digital signals obtained by the second optical receiving unit; a plurality of interfaces, connected to a plurality of terminals in one-to-one correspondence, configure to respectively transmit data matching the corresponding terminal to the corresponding terminal; and a destination judging and header processing unit for judging the destination of the data of the digital content extracted by the passive optical network processing unit to determine a particular terminal to which the data of the digital content is downloaded, to perform a header processing for the data of the digital content to identify the content retailer, and to transmit the data of the digital content to the particular terminal through one interface

corresponding to the particular terminal (Abstract, Figures 1, 4A-4B, 8, 10, column 4 lines 60-67, column 5 lines 1-27, lines 51-64, column 7 lines 15-29, column 10 lines 30-45).

16. Regarding claim 8, Matsunaga disclosed a digital content downloading system using a network, wherein the digital content is a music file, a video file, or a game software title (column 1 lines 14-24, lines 52-57).

17. Regarding claims 9-13 and 16, the limitations of these claims correspond directly to the system of claims 1-5 and 8, and thus these claims are rejected using the same rationale.

18. Regarding claim 17, Touma and Matsunaga combined disclose a digital downloading system wherein the resource reservation server is arranged in the network separate from the optical line terminator and the optical networking units (Abstract, Figures 1, 5, 8, 10,

19. Regarding claim 18, Matsunaga disclosed a digital downloading system wherein the resource reservation server is configured to reserve the particular bandwidth so that the particular bandwidth is reserved from a particular start time to a particular end time (column 3 lines 28-51, column 5 lines 59-67).

20. Since all the limitations of the claimed invention were disclosed by the combination of Touma and Matsunaga, claims 1-5, 8, 9-13, and 16-18 are rejected.

21. Claims 6-7 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Touma et al. (U.S. Patent Number 6,288,809), hereinafter referred to as Touma, in

view of Matsunaga et al. (U.S. Patent Number 6,434,164), hereinafter referred to as Touma, and further in view of Sawyer (U.S. Patent Number 5,828,737).

22. Regarding claim 6, Touma disclosed a digital content downloading system using a network in which digital content possessed by a digital content retailer is downloaded to one of a plurality of consumers through a network, comprising: a plurality of subscriber lines each formed of an optical fiber and arranged between the consumers and the network, the network being managed by a network operator; an optical line terminator, arranged on one side of the network, for terminating a subscriber line on the network side; an optical network unit, arranged on a side of each consumer, for terminating a subscriber line on the consumer side; a star coupler configured to connect the subscriber lines terminated by the optical network units to the subscriber line terminated by the optical line terminator (Abstract, Figures 1, 5, 8,10, 12-13,16, column 1 lines 11-29, column 4 lines 60-67, column 5 lines 28-44). Matsunaga disclosed digital content downloading system such as passive optical star network comprising a resource reservation server for reserving a particular bandwidth for the digital content in the subscriber lines in response to a request by a particular consumer; and downward bandwidth managing means for controlling the downloading of the digital content from the digital content retailer to the optical network unit of the particular consumer to transmit the digital content through the subscriber lines and the star coupler at the particular bandwidth reserved by the resource reservation server (Figures 2, 4, 7, 11, and 13, column 10 lines 26-34).

23. The combination of Touma and Matsunaga taught the invention substantially as claimed. However, Touma and Matsunaga did not teach a digital content downloading system using a network, wherein the content retailer charges the particular consumer for the downloading of the digital content according to the particular bandwidth reserved by the resource reservation server, a time period used for the downloading or a time zone used for the downloading.

24. Matsunaga suggested exploration of art and/or provided a reason to modify the digital content downloading using network with the bandwidth-billing feature for subscriber services (Title, column 1 lines 52-56).

25. Sawyer disclosed a digital content downloading system using a network, wherein the content retailer is configured to charge the particular consumer for the downloading of the digital content according to the particular bandwidth reserved by the resource reservation server, a time period used for the downloading or a time zone used for the downloading (Title, Abstract, Figures 1 and 3B, column 1 lines 2 lines 1-5, 7-18, column 4 lines 6-32, column 5 lines 29-54).

26. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the combined system of Touma and Matsunaga with the teaching of Sawyer to include the bandwidth billing feature in order to accurately charge the subscriber (Sawyer, column 1 lines 54-67) since charging users for access to and the use of the communication system is an important concern for the service providers (Sawyer, column 4 lines 6-13).

27. Regarding claim 7, Sawyer disclosed a digital content downloading system using a network, wherein information of charges corresponding to a bandwidth used for the downloading of data including the digital content, a time period used for the downloading of data including the digital content, or a time zone used for the downloading of data including the digital content is transmitted from the network operator to the consumers (Title, Abstract, Figures 1 and 3B, column 1 lines 2 lines 1-5, 7-18, column 4 lines 6-32, column 5 lines 29-54, column).

28. Regarding claims 14-15, the limitations of these claims correspond directly to the system of claims 6-7, and thus these claims are rejected using the same rationale.

29. Since all the limitations of the claimed invention were disclosed by the combination of Touma and Matsunaga, claims 6-7 and 14-15 are rejected.

30. Claims 1-3, 6-8, 9-11, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wright et al. (EP 869634), hereinafter referred to as Wright, in view of Caterisano (WO 9818235).

31. Regarding claim 1, Wright disclosed a digital content downloading system using a network in which digital content possessed by a digital content retailer is downloaded to one of a plurality of consumers through a network, comprising: a plurality of subscriber lines each formed of an optical fiber and arranged between the consumers and the network, the network being managed by a network operator; an optical line terminator, arranged on one side of the network, for terminating a subscriber line on the network side; an optical network unit, arranged on a side of each consumer, for

terminating a subscriber line on the consumer side; a star coupler configured to connect the subscriber lines terminated by the optical network units to the subscriber line terminated by the optical line terminator (Abstract, Figures 1-2, 6, 8, 18-19, page 2 lines 3-18, page 5 lines 5-10, page 7 lines 25-32, page 10 lines 1-13, lines 42-47).

32. Wright taught the invention substantially as claimed. However, Wright did not expressly teach a resource reservation server configured to reserve a particular bandwidth for the digital content in the subscriber lines in response to a request by a particular consumer; and downward bandwidth managing means for controlling downloading of the digital content from the digital content retailer to the optical network unit of the particular consumer so that the digital content is transmitted through the subscriber lines and the star coupler at the particular bandwidth reserved by the resource reservation server.

33. In an analogous art, Caterisano disclosed digital content downloading system such as passive optical star network comprising a resource reservation server for reserving a particular bandwidth for the digital content in the subscriber lines in response to a request by a particular consumer; and downward bandwidth managing means for controlling the downloading of the digital content from the digital content retailer to the optical network unit of the particular consumer to transmit the digital content through the subscriber lines and the star coupler at the particular bandwidth reserved by the resource reservation server (Abstract, Figures 3-5, page 3 lines 3-14, page 43 lines 22-27, page 44 lines 3-17, page 45 lines 3-22).

34. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the system of Wright with the teaching of Caterisano to include the bandwidth reservation feature in order to guarantee quality of service in downloading digital content (Caterisano, page 2 lines 3-14, page 4 lines 12-26) since users of digital data such as voice, audio, and video transmission required high and guarantee bandwidth (Caterisano, page 3 lines 3-14).

35. Regarding claim 2, Caterisano disclosed a digital content downloading system using a network, wherein the particular bandwidth for the digital content reserved in response to the request by the particular consumer by the resource reservation server is guaranteed in a shared bandwidth of the subscriber lines (page 3 lines 3-9, page 4 lines 12-26, page 44 lines 3-16).

36. Regarding claim 3, Wright disclosed a digital content downloading system using a network, wherein the particular bandwidth for the digital content reserved by the resource reservation server in response to the request by the particular consumer is guaranteed in a first signal having a wavelength differing from that of a second signal corresponding to a shared bandwidth of the subscriber lines (Abstract, Figures 1-2, 6, page 5 lines 5-10, lines 48-54 page 6 lines 7-12).

37. Regarding claim 6, Caterisano disclosed a digital content downloading system using a network, wherein the content retailer is configured to charge the particular consumer for the downloading of the digital content according to the particular bandwidth reserved by the resource reservation server, a time period used for the

downloading or a time zone used for the downloading (page 3 lines 3-9, page 4 lines 12-26, page 44 lines 3-16, page 45 lines 3-9).

38. Regarding claim 7, Caterisano disclosed a digital content downloading system using a network, wherein information of charges corresponding to a bandwidth used for the downloading of data including the digital content, a time period used for the downloading of data including the digital content, or a time zone used for the downloading of data including the digital content is transmitted from the network operator to the consumers (page 3 lines 3-9, page 4 lines 12-26, page 44 lines 3-16, page 45 lines 3-9).

39. Regarding claim 8, Caterisano disclosed a digital content downloading system using a network, wherein the digital content is a music file, a video file, or a game software title (page 3 lines 3-9).

40. Regarding claims 9-11 and 14-16, the limitations of these claims correspond directly to the system of claims 1-3 and 6-8, and thus these claims are rejected using the same rationale.

41. Regarding claim 17, Wright and Caterisano combined disclose a digital downloading system wherein the resource reservation server is arranged in the network separate from the optical line terminator and the optical networking units (Wright, Abstract, page 2 lines 3-18, page 4 lines 1-6; Caterisano, Figures 3, page 37 lines 12-27).

42. Regarding claim 18, Caterisano disclosed a digital downloading system wherein the resource reservation server is configured to reserve the particular bandwidth so that

the particular bandwidth is reserved from a particular start time to a particular end time (page 4 lines 12-26).

43. Since all the limitations of the claimed invention were disclosed by the combination of Wright and Caterisano, claims 1-3, 6-8, 9-11, and 14-18 are rejected.

Response to Arguments

44. Applicant's arguments filed 06/07/2004 have been fully considered but they are not persuasive.

45. Regarding to Applicant's argument "Applicants respectfully submit that the ç 164 patent fails to disclose downward bandwidth managing means, arranged in the optical line terminator, for controlling the downloading of the digital content from the digital content retailer to the optical network unit of the particular consumer, so that the digital content is transmitted through the subscriber lines and the star coupler at the particular bandwidth reserved by the resource reservation server, as recited in amended Claim 1. The 164 patent fails to disclose that a downward bandwidth management means is arranged in an optical line terminator for controlling downloading of data." Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

46. In response to applicant's argument that "the 164 patent fails to disclose that bandwidth is reserved for the downloading of digital content from a retailer to an optical network unit of a consumer. Rather, the 164 patent merely discloses the reservation of bandwidth for sending data from a subscriber unit to a center station", a recitation of the

intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). As stated by the Applicant, "the reservation of bandwidth for sending data from a subscriber unit to a center station. From the center station perspective, the reservation of bandwidth is for downloading data from the subscriber unit. In addition, the '164 patent disclosed "Examples of such services [requested data] are real-time audio and video packet transmission." Clearly, real-time audio and video are well-known digital contents.

47. Upon consideration of Applicant Admitted Prior Art (Applicant's IDS form 1449, Received on 01/05/2004), a new ground(s) of rejection is made in view of Wright et al. (EP 869634) and Caterisano (WO 98/18235) as detailed in the rejection above.

48. As the rejection reads, Examiner asserts that the combination of these teachings render the claimed invention obvious.

Conclusion

49. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam (Jenny) Phan whose telephone number is (703)

305-4665 or (571) 272-3930 (new telephone number after October 2004). The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on 703-308-3873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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August 21, 2004